



USER MANUAL

Industrial Grade Managed Ethernet Switches

CLI Configuration User Manual

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Chapter 1 System Status Command

1.1 System Information

دستورات show باید در محیط Privilege Mode نوشته شود.

1.1.1 show version

```
Switch#show version
MEMORY       : Total=88580 KBytes, Free=75552 KBytes, Max=75329 KBytes
FLASH        : 0x40000000-0x40ffffff, 256 x 0x10000 blocks
MAC Address   : 20-77-59-01-c1-27
SN           :
Previous Restart : Cold

System Contact : Web: www.sepitam.com
System Name    : Switch
System Location :
Timezone Offset : 0
System Time    : 1970-01-01T01:47:59+00:00
System Uptime  : 01:47:59

Active Image
-----
Image        : (primary)
Version      : V2.1
Date         : 2021-06-28T17:57:11+08:00

Alternate Image
-----
```

1.1.2 show clock

```
Switch#show clock
System Time   : 1970-01-01T01:55:37+00:00
```

1.2 System Log

1.2.1 show logging

[Switch#show logging](#)

Switch logging host mode is disabled
 Switch logging host address is null
 Switch logging level is informational

Number of entries on Switch 1:

Error : 0
 Warning : 0
 Notice : 4
 Informational: 1
 All : 5

ID	Level	Time & Message
1	Informational	1970-01-01T00:00:01+00:00 SYS-BOOTING: Switch just made a cold boot.
2	Notice	1970-01-01T00:00:02+00:00 LINK-UPDOWN: Interface Vlan 1, changed state to down
3	Notice	1970-01-01T00:00:07+00:00 LINK-UPDOWN: Interface Vlan 1, changed state to up.

1.3 Port Statistics

1.3.1 show interface

[Switch# show interface GigabitEthernet 1/1-8 status](#)

Interface	Mode	Speed & Duplex	Flow Control	Max Frame	Excessive	Link
GigabitEthernet 1/1	enabled	Auto	disabled	9600	Discard	Down
GigabitEthernet 1/2	enabled	Auto	disabled	9600	Discard	Down
GigabitEthernet 1/3	enabled	Auto	disabled	9600	Discard	1Gfdx
GigabitEthernet 1/4	enabled	Auto	disabled	9600	Discard	Down
GigabitEthernet 1/5	enabled	Auto	disabled	9600	Discard	Down
GigabitEthernet 1/6	enabled	Auto	disabled	9600	Discard	Down
GigabitEthernet 1/7	enabled	Auto	disabled	9600	Discard	Down
GigabitEthernet 1/8	enabled	Auto	disabled	9600	Discard	100fdx

1.4 LACP Status

1.4.1 show lacp neighbor

Command Description

For LACP Status

Parameter

N/A

Default

N/A

Command Mode

Privilege Mode

Example

`Switch#show lacp neighbor`

1.5 STP Status

1.5.1 show spanning-tree

Switch#show spanning-tree active									
CIST Bridge STP Status									
Bridge ID : 32768.20-77-59-01-C1-27									
Root ID : 32768.20-77-59-01-C1-27									
Root Port :-									
Root PathCost: 0									
Regional Root: 32768.20-77-59-01-C1-27									
Int. PathCost: 0									
Max Hops : 20									
TC Flag : Steady									
TC Count : 0									
TC Last :-									
Port	Port Role	State	Pri	PathCost	Edge	P2P	Uptime		

1.5.2 show spanning-tree interface

Command Description

For the Spanning Tree port status

Parameter

N/A

Default

N/A

Command Mode

Privilege Mode

Example

`Switch#show spanning-tree interface GigabitEthernet 1/10`

1.6 LLDP Status

1.6.1 show lldp neighbors

Switch#show lldp neighbors	
Local Interface	: GigabitEthernet 1/3
Chassis ID	: A0-8C-FD-C4-2C-E5
Port ID	: A0-8C-FD-C4-2C-E5
Port Description	:
System Name	:
System Description	:
System Capabilities	:
PoE Type	:
PoE Source	:
PoE Power	:
PoE Priority	:
Local Interface	: GigabitEthernet 1/8
Chassis ID	: 192.168.4.7
Port ID	: 80-5E-C0-B4-B5-63
Port Description	: WAN PORT
System Name	: SIP-T19P_E2
System Description	: 53.84.203.3
System Capabilities	: Bridge(+),
Telephone(+)	:
PoE Type	: PD Device,
PoE Source	: PSE
PoE Power	: 3.8 [W]

1.7 Layer 2 Forwarding List

1.7.1 show mac address-table

Switch#show mac address-table			
Type	VID	MAC Address	Ports
Dynamic	1	00:0a:f7:4b:a4:49	GigabitEthernet 1/8
Dynamic	1	00:0c:29:17:14:62	GigabitEthernet 1/8
Dynamic	1	00:0c:29:22:b5:96	GigabitEthernet 1/8
Dynamic	1	00:0c:29:5b:0b:26	GigabitEthernet 1/8
Dynamic	1	00:0c:29:94:5f:62	GigabitEthernet 1/8
Dynamic	1	00:0c:29:c2:3b:ce	GigabitEthernet 1/8
Dynamic	1	00:0c:29:f7:7f:57	GigabitEthernet 1/8
Dynamic	1	00:1c:27:11:f6:68	GigabitEthernet 1/8
Dynamic	1	00:1c:27:12:f3:b2	GigabitEthernet 1/8
Dynamic	1	00:22:0d:98:cf:07	GigabitEthernet 1/8
Dynamic	1	00:24:e8:f5:51:ba	GigabitEthernet 1/8
Dynamic	1	04:42:1a:00:92:22	GigabitEthernet 1/8
Dynamic	1	04:42:1a:0a:b3:95	GigabitEthernet 1/8
Dynamic	1	04:42:1a:29:04:33	GigabitEthernet 1/8
Dynamic	1	18:70:3b:68:40:2d	GigabitEthernet 1/8
Static	1	20:77:59:01:c1:27	CPU
Static	1	33:33:00:00:00:01	GigabitEthernet 1/1-14 CPU
Static	1	33:33:00:00:00:02	GigabitEthernet 1/1-14 CPU
Static	1	33:33:ff:01:c1:27	GigabitEthernet 1/1-14 CPU
Dynamic	1	3c:d9:2b:5d:3d:a8	GigabitEthernet 1/8
Dynamic	1	44:03:77:20:5d:44	GigabitEthernet 1/8

1.7.2 show mac address-table static

Switch#show mac address-table static			
Type	VID	MAC Address	Ports
Static	1	20:77:59:01:c1:27	CPU
Static	1	33:33:00:00:00:01	GigabitEthernet 1/1-14 CPU
Static	1	33:33:00:00:00:02	GigabitEthernet 1/1-14 CPU
Static	1	33:33:ff:01:c1:27	GigabitEthernet 1/1-14 CPU

1.7.3 show mac address-table count

Switch#show mac address-table count	
Port Dynamic addresses	
GigabitEthernet 1/1	0
GigabitEthernet 1/2	0
GigabitEthernet 1/3	1
GigabitEthernet 1/4	0
GigabitEthernet 1/5	0
GigabitEthernet 1/6	0
GigabitEthernet 1/7	0
GigabitEthernet 1/8	38
GigabitEthernet 1/9	0
GigabitEthernet 1/10	0
GigabitEthernet 1/11	0
GigabitEthernet 1/12	0
GigabitEthernet 1/13	0
GigabitEthernet 1/14	0
Total learned dynamic addresses for the switch: 39	
Total static addresses in table: 4	

1.7.4 show mac address-table learning

Switch#show mac address-table learning	
Port	Learning
GigabitEthernet 1/1	Auto
GigabitEthernet 1/2	Auto
GigabitEthernet 1/3	Auto
GigabitEthernet 1/4	Auto
GigabitEthernet 1/5	Auto
GigabitEthernet 1/6	Auto
GigabitEthernet 1/7	Auto
GigabitEthernet 1/8	Auto
GigabitEthernet 1/9	Auto
GigabitEthernet 1/10	Auto
GigabitEthernet 1/11	Auto
GigabitEthernet 1/12	Auto
GigabitEthernet 1/13	Auto
GigabitEthernet 1/14	Auto

1.7.5 show mac address-table interface GigabitEthernet 1/10

Switch#show mac address-table interface GigabitEthernet 1/10			
Type	VID	MAC Address	Ports
Static	1	33:33:00:00:00:01	GigabitEthernet 1/1-14 CPU
Static	1	33:33:00:00:00:02	GigabitEthernet 1/1-14 CPU
Static	1	33:33:ff:01:c1:27	GigabitEthernet 1/1-14 CPU

1.7.6 show mac address-table vlan 1

```
Switch#show mac address-table vlan 1
```

Type	VID	MAC Address	Ports
Dynamic	1	00:0a:f7:4b:a4:49	GigabitEthernet 1/8
Dynamic	1	00:0c:29:17:14:62	GigabitEthernet 1/8
Dynamic	1	00:0c:29:22:b5:96	GigabitEthernet 1/8
Dynamic	1	00:0c:29:94:5f:62	GigabitEthernet 1/8
Dynamic	1	00:0c:29:c2:3b:ce	GigabitEthernet 1/8
Dynamic	1	00:1c:27:11:f6:68	GigabitEthernet 1/8
Dynamic	1	00:1c:27:12:f3:b2	GigabitEthernet 1/8
Dynamic	1	00:22:0d:98:cf:07	GigabitEthernet 1/8
Dynamic	1	00:24:e8:f5:51:ba	GigabitEthernet 1/8
Dynamic	1	04:42:1a:00:92:22	GigabitEthernet 1/8
Dynamic	1	04:42:1a:0a:b3:95	GigabitEthernet 1/8
Dynamic	1	04:42:1a:29:04:33	GigabitEthernet 1/8
Dynamic	1	14:1f:78:e4:8b:f3	GigabitEthernet 1/8
Static	1	20:77:59:01:c1:27	CPU
Static	1	33:33:00:00:00:01	GigabitEthernet 1/1-14 CPU
Static	1	33:33:00:00:00:02	GigabitEthernet 1/1-14 CPU
Static	1	33:33:ff:01:c1:27	GigabitEthernet 1/1-14 CPU
Dynamic	1	3c:d9:2b:5d:3d:a8	GigabitEthernet 1/8
Dynamic	1	44:03:77:20:5d:44	GigabitEthernet 1/8
Dynamic	1	44:03:77:20:5d:7e	GigabitEthernet 1/8
Dynamic	1	44:03:77:20:5d:88	GigabitEthernet 1/8

1.8 Loop-Protect Status

1.8.1 show loop-protect

```
Switch#show loop-protect
interface GigabitEthernet 1/1-10
```

Loop Protection Configuration
=====
Loop Protection : Disable
Transmission Time : 5 sec
Shutdown Time : 180 sec
GigabitEthernet 1/1

Loop protect mode is enabled.
Action is shutdown.
Transmit mode is enabled.
No loop.
The number of loops is 0.
Status is down.
GigabitEthernet 1/2

Loop protect mode is enabled.
Action is shutdown.
Transmit mode is enabled.
No loop.

Chapter 2 System Settings

2.1 IP Configuration

Switch# show ip interface brief			
Interface	Address	Method	Status
VLAN 1	192.168.2.1/24	Manual	UP

2.1.1 Ip address

برای اعمال برخی از کانفیگ ها بر روی سویچ باید در محیط Mode Global، دستورات را وارد کنیم.

Command Description

Ip address, Switch Port Configuration for managing IP no ip address A.B.C.D, indicates deleting Port ip A.B.C.D

Parameter

N/A

Default

Enable

Command Mode

VlanPort Configuration Mode

Example

```
Switch(config)# interface vlan 1
```

```
Switch(config-if-vlan)# ip address 192.168.255.200 255.255.255.0
```

مراحل تغییر IP دستگاه
<pre># configure terminal (config)# interface vlan 1 (config-if-vlan)# ip address 192.168.2.106 255.255.255.0</pre>

2.1.2 ip address dhcp

Command Description

ip address dhcp, Switch Configuration to manage ip (vlan1) automatic access (DHCP Sever will allot a dynamic IP for vlan 1 of the switch)

no ip address dhcp, indicating that disable management for IP DHCP allocation. (Static Manual Configuration Mode)

Parameter

N/A

Default

Enable

Command Mode

vlan Configuration Mode

Example

[Switch\(config\) interface vlan 1](#)

[Switch\(config-if-vlan\)#ip address dhcp](#)

2.1.3 show ip interface

Command Description

For IP configuration of the port

Parameter

N/A

Default

Enable

Command ModePrivilege Mode

Example

[Switch#show interface brief](#)

logging level warning / error / informational / notice

2.2 System log Configuration

Log Configuration Command :

- logging on
- logging host

2.2.1 logging on

Command Description logging on,

enable log server mode

No logging on, disable logging Server mode

Parameter

N/A

Default

N/A

Command Mode Global

Mode

Example

[Switch\(config\)#logging on](#)

[Switch\(config\)#no logging on](#)

برای تنظیم host برای syslog از اسم یا IP استفاده شود تا در صورت تغییر سرور نیازی نباشد دستگاه را مجدد تنظیم کنیم.

2.2.2 logging host

Command Description

Log Server IP Address Configuration

Parameter

Hostname //Log Server Realm Name or IP address

Default

N/A

Command Mode

Global Mode

Example

[Switch\(config\)#logging host 192.168.0.1](#)

2.2.3 logging level

Command Description

Configuration of Log Level for the uploading server ;

Parameter

Error | warning | info

Default

N/A

Command Mode

Global Mode

Example

[Switch\(config\)#logging level error](#)

2.3 User Configuration

User Configuration Command :

username name

Note : name, indicating the account name, support max 18 characters ; password, support max 18 characters ;

Switch#show user-privilege
--

username admin privilege 15 password encrypted c3lzdGVt

2.3.1 username name

Command Description

username name privilege level password none|encrypted|unencrypted password

For add user / modify the password of an existed user / modify the administration authority of an existed user / modify the password and administration authority of an existed user

Level, the user account authority level, valid level(1 is the lowest administration authority, 15 is the highest administration authority) ; no username name, deleting a existed account

Parameter

N/A

Default

N/A

Command Mode

Global mode

Example

[Switch\(config\)# username test privilege 15 password encrypted test](#)

//New account : test, Password : test, Authority : the highest administration authority ;

Password Type : ciphertext

[Switch\(config\)#no username test](#)

2.3.2 show users

Command Description

For all users configuration information of the switch

Command Mode

Privilege Mode

Example

Switch#show users

```
Line is vty 0.  
* You are at this line now.  
Connection is from 192.168.2.100:52526 by SSH.  
User name is admin.  
Privilege is 15.  
Elapsed time is 0 day 0 hour 27 min 21 sec.  
Idle time is 0 day 0 hour 0 min 0 sec.
```

هر کانفیگی که انجام داده باشید با دستور زیر مشخص می شود و یا به طور پیش فرض می توانید مشخصات سوییچ را مشاهده کنید.

This command could also be used for checking all user account

Switch#show running-config

```
Building configuration...  
username admin privilege 15 password encrypted c3lzdGVt  
!  
vlan 1  
!  
!  
!  
aggregation mode smac dmac ip port  
spanning-tree mst name 20-77-59-01-c1-27 revision 0  
poe management mode class-consumption  
poe supply 250  
snmp-server contact Web: www.sepitam.com  
!  
interface GigabitEthernet 1/1  
no spanning-tree  
!  
interface GigabitEthernet 1/2  
no spanning-tree  
!  
interface GigabitEthernet 1/3  
no spanning-tree  
!  
interface GigabitEthernet 1/4  
no spanning-tree  
!  
interface GigabitEthernet 1/5  
no spanning-tree  
!  
interface GigabitEthernet 1/6  
no spanning-tree  
!  
interface GigabitEthernet 1/7
```

```
no spanning-tree
!  
interface GigabitEthernet 1/8  
no spanning-tree  
!  
interface GigabitEthernet 1/9  
no spanning-tree  
!  
interface GigabitEthernet 1/10  
no spanning-tree  
!  
interface GigabitEthernet 1/11  
no spanning-tree  
!  
interface GigabitEthernet 1/12  
no spanning-tree  
!  
interface GigabitEthernet 1/13  
no spanning-tree  
!  
interface GigabitEthernet 1/14  
no spanning-tree  
!  
interface vlan 1  
ip address 192.168.2.1 255.255.255.0
```

2.4 NTP Configuration

ntp Configuration Command : ntp server show ntp status

2.4.1 ntp

Command Description

- ✓ ntp , Enable the NTP ;
- ✓ no ntp, Disable the NTP ;

Parameter

N/A

Default

N/A

Command Mode

Global Mode

Example

Switch(config)# ntp

Switch(config)# no ntp

2.4.2 ntp server

Command Description

ntp server <index_var> ip-address { <ipv4_var> | <ipv6_var> | <name_var> } NTP

Server address or realm name configuration index_var 1-5, Support 5 NTP servers

no ntp server index_var , Delete a NTP address

Parameter

N/A

Default

N/A

Command Mode

Global Mode

Example

```
Switch(config)# ntp server 1 ip-address 200.194.203.55
```

```
Switch(config)# no ntp server 1 ipaddress
```

2.4.3 show ntp status

Command Description

For NTP Server Configuration Information

Parameter

N/A

Default

N/A

Command Mode Privilege Mode

Example

```
Switch(config)# show ntp status
```

Chapter 3 Port Configuration Command

3.1 Port Configuration

Port configuration command : duplex speed flowcontrol shutdown

3.1.1 duplex

Command Description

duplex { auto | full | half } no

duplex

Setting the duplex mode for the port. Noted: If there isn't any special requirement, please do not change the rate mode of the port. Or it will influence the port proper working.

Parameter

Parameter	ParameterCommand Mode
auto	Automatic
full	Full duplex
half	Half duplex

Default

All port is auto. The mode of optical port is fixed full duplex

Command Mode

Port configuration Mode

Example

`Switch(config)# interface GigabitEthernet 1/1`

`Switch(config-if)# duplex full`

`Switch(config-if)# no duplex full`

3.1.2 speed

Command Description

speed { 10 | 100 | 1000 | 10000 | auto }, Setting port rate no speed

Parameter

Parameter	ParameterCommand Mode
10 100 1000 10000	Port rate: 10M、100M、1000M、10000Mbps
Auto	Automatically setting port rate

Default

Electrical port is automatic as default, gigabit optical port is adaptive, 10 gigabit port is forced to 10000M ;

Command Mode

Port Configuration Mode

Note: Optical port rate is forced to 1000M and 10000M. Electrical port could be set to Auto, 10M, 100, and 1000M.

Example

```
Switch(config)# interface GigabitEthernet 1/1
```

```
Switch(config-if)# speed 1000
```

3.1.3 flowcontrol

Command Description

flowcontrol on/off, Enable and disable flow control function

Parameter

N/A

Default

Disable, gigabit optical port can not support flow control

Command Mode

Port Configuration Mode

Example

```
Switch(config-if)# flowcontrol on
```

```
Switch(config-if)# flowcontrol off
```

3.1.4 shutdown

Command Description

- ✓ shutdown, disable the port
- ✓ no shutdown, enable the port

Parameter

N/A

Default

Enable

Command Mode

Port Configuration Mode Example

```
Switch(config-if)# no shutdown
```

این دستور باعث می‌شود که یک اینترفیس فعال شود. فراموش نکنید که باید از دستور no shutdown در مد interface استفاده کنید.

3.1.5 POE

Command Description

- ✓ poe mode standard,enable 15.4w
- ✓ no poe mode,disable the power

show poe,display poe status poe mode plus,enable 30w Example

```
Switch(config-if)# poe mode plus
```

```
Switch(config-if)# poe mode standard
```

```
Switch(config-if)# no poe mode
```

```
Switch#show poe
```

3.2 Port Isolation

3.2.1 pvlan isolation

Command Description

Port Isolation Configuration. Forbid the connection between ports under same vlan

Parameter

N/A

Default

N/A

Command Mode

Port Configuration Mode

Example

```
Switch(config)# interface GigabitEthernet 1/1-5
```

```
Switch(config-if)# pvlan isolation //Isolate port 1~5
```

```
Switch(config-if)# no pvlan isolation //cancel the isolation for the port 1~5
```

3.3 Port Monitor

3.3.1 Monitor destination

Command Description

- ✓ monitor destination, Enable the monitor destination port
- ✓ no monitor destination, Disable the monitor destination port

Parameter

N/A

Default

N/A

Command Mode

Global Mode

Example

`Switch(config)# monitor destination interface GigabitEthernet 1/1`

`Switch(config)# no monitor destination`

3.3.2 Monitor source

Command Description

- ✓ monitor source, Enable the monitor source port
- ✓ no monitor source interface GigabitEthernet 1/2. Disable the monitor source port

Parameter

`monitor source { { interface (<port_type> [<v_port_type_list>]) } | { both | rx | tx } }`

`port_type` : GigabitEthernet or XGigabitEthernet ;

`Both/rx/tx` : Mirror direction, indicating ingress and Egress/ ingress/ egress data of mirror monitor port.

Default

N/A

Command Mode

Global Mode

Example

`Switch(config)# monitor source interface GigabitEthernet 1/2 both`

`Switch(config)# no monitor source interface GigabitEthernet 1/2`

3.4 Port Security

3.4.1 access-list ace

Command Description access-list

ace,

Port Security Policy Entry Configuration

Parameter

N/A

Default

N/A

Command Mode

Global Mode

Example

```
Switch(config)# access-list ace 2 action deny frame-type ipv4 ip-protocol any logging shutdown
```

3.5 Port Policy

3.5.1 access-list rate-limiter

Command Description access-list rate-limiter, ACL Band width Limit

Policy Configuration

Parameter

```
<RateLimiterList : 1~16> pps <PpsRate : 0-131071>
```

DefaultN/A

Command ModeGlobal Mode

Example

```
Switch(config)# access-list rate-limiter 4 pps 100000
```

```
//Limit for ACL Policy ID4 configuration: 1000000 pps
```

Chapter 4 Advanced Configuration Command

4.1 Link Aggregation

Static Aggregation Configuration Command :

- aggregation mode
- aggregation group Dynamic Aggregation

Configuration Command :

- lacp
- lacp key
- lacp port-priority
- lacp role
- lacp timeout

4.1.1 aggregation mode

Command Description

aggregation mode {ip | smac | dmac | smac dmac | port }, aggregation load-balancing algorithm configuration
 no aggregation mode, aggregation load-balancing algorithm configuration to default
 Parameter

Parameter	ParameterCommand Mode
ip	load-balancing based on ip address
smac	load-balancing based on source mac address
dmac	load-balancing based on destination mac address
smac dmac	load-balancing based on source & destination mac address
port	load-balancing based on tcp / udp port number

Default load-balancing based on ip address

Command Mode

Global Mode

Example

`Switch(config)# aggregation mode smac dmac`

4.1.2 aggregation group

Command Description

- ✓ aggregation group group-id, Configuration for port to an aggregation group
- ✓ no aggregation group, Configuration for deleting static aggregation for a group

Parameter

group-id, Aggregation group id

Default

N/A

Command ModePort Configuration Mode

Example

`Switch(config)# interface GigabitEthernet 1/1-8`

`Switch(config-if)# aggregation group 2`

`Switch(config-if)# no aggregation group`

4.1.3 lacp

Command Description

- ✓ lacp, Configuration for enable dynamic Aggregation of port
- ✓ no lacp, Configuration for disable dynamic Aggregation of port

Parameter

N/A

Default

N/A

Command Mode

Port Configuration Mode

Example

```
Switch(config)# interface GigabitEthernet 1/1-4
```

```
Switch(config)# lacp
```

```
Switch(config)# no lacp
```

4.1.4 lacp key

Command Description

Lacp key, Configuration for the key value of dynamic aggregation port

Parameter

<1-65535> key value, ranges for the setting value 1-65535 ; auto, key value at automatic settings ;

Default

auto

Command Mode

Port Configuration Mode

Example

```
Switch(config-if)# lacp key 100
```

4.1.5 lacp port-priority

Command Description

lacp port-priority <1-65535> , Configuration for the Lacp Port-priority

Parameter

<1-65535> , Ranges for priority, The value is less, the priority level is higher

Default

N/A

CommandMode

Port Configuration Mode

Example

```
Switch(config-if)# lacp port-priority 100
```

4.1.6 lacp role

Command Description

lacp role active | passive, Configuration for dynamic aggregation port role

Parameter

active | passive, Indicating the port role is active and passive respectively

Default

active

Command ModePort Configuration Mode

Example

```
Switch(config-if)#lacp role active
```

```
Switch(config-if)#lacp role passive
```

4.1.7 lacp timeout

Command Description

Lacp timeout fast | slow,Configuration for Lacp timeout selections

Parameter

fast | slow, indicating fast and slow respectively

Default

fast

Command ModePort Configuration Mode

Example

```
Switch(config-if)# lacp timeout fast
```

```
Switch(config-if)# lacp timeout slow
```

4.2 VLAN Management

Configuration Command :

- vlan
- name
- switchport mode
- switchport access vlan
- switchport forbidden vlan

Switchport hybrid acceptable-frame-type

Switchport hybrid ingress-filtering

Switchport hybrid native

Switchport hybrid egress-tag

show vlan

4.2.1 Vlan

Command Description

vlan { vlan_list}, add vlan no vlan , delete vlan

Parameter

<vlan_list> VLAN ID, valid ranges 1-4095,4095 should be kept, the real using ranges is 14094

Default

vlan 1, All port is vlan 1

Command Mode

Global Configuration Mode

Example

```
Switch(config)#vlan 2-3,6,9 //Add vlan 2,3,6,9 , 4 vlan ports
```

```
Switch(config)#no vlan 6,9 //Delete vlan 6,9
```

4.2.2 Name

Command Description

Name <vword32>, Setting vlan name

Parameter

<vword32> , vlan name

Default default

Command Mode

vlan configuration mode

Example

```
Switch(config)# vlan 2
```

```
Switch(config-vlan)# name test123
```

4.2.3 switchport mode

Command Description switchport mode { access | trunk | hybrid }

Parameter

Parameter	ParameterCommand Mode
access	Access mode
trunk	Trunk mode
Hybrid	Hybrid mode

Switch ports could support several modes as below:

Access Mode: The port is only under one vlan, and only send and receive the data marked with N/A.

Trunk Mode: The port could be connect with other switches, and could send and receive marked data.

Hybrid Mode: The port could be connect with PC, switches, and routers(It is the combination of Trunk mode and Access Mode)

Default Hybrid Mode

Command Mode

Port Configuration Mode

Example

```
Switch(config)# interface GigabitEthernet 1/2-4
```

```
Switch(config-if)#switchport mode access
```

```
Switch(config)# interface GigabitEthernet 1/1
```

```
Switch(config-if)#switchport mode trunk
```

4.2.4 switchport access vlan

Command Description

switchport access vlan { vlan-id }

Parameter

Parameter	ParameterCommand Mode
Vlan-id	Vlan ID ranges 1-4094

Default

Vlan 1

Command ModePort Configuration Mode

Example

Switch(config)#vlan 2

Switch(config)# interface GigabitEthernet 1/5-8

Switch(config-if)#switchport mode access

Switch(config-if)#switchport access vlan 2

4.2.5 Switchport forbidden vlan

Command Description

switchport forbidden vlan { add | remove } {vlan-id}

Parameter

Parameter	ParameterCommand Mode
add	enable vlan list
Remove	disable vlan list
Vlan-id	Vlan ID ranges1-4094

Default

Enable Vlan 1

Command ModePort Configuration Mode

Example

Switch(config)# interface GigabitEthernet 1/1

Switch(config-if)# switchport mode hybrid

Switch(config-if)# switchport forbidden vlan add 2

Switch(config-if)# switchport forbidden vlan remove 3-4

4.2.6 Switchport hybrid acceptable-frame-type

Command Description

Switchport hybrid acceptable-frame-type <all | tagged | untagged> Parameter

all | tagged | untagged enable/ disable hybrid port receiving data of all tag

Default

all

Command ModePort Configuration Mode

Example

Switch(config)# interface GigabitEthernet 1/1

Switch(config-if)# switchport hybrid acceptable-frame-type all

4.2.7 Switchport hybrid ingress-filtering

Command Description

- ✓ Switchport hybrid ingress-filtering , Enable Port hybrid ingress-filtering
- ✓ no switchport hybrid ingress-filtering , Disable Port hybrid ingress-filtering

Parameter

N/A

Default

Disable

Command Mode

Port Configuration Mode

Example

Switch(config)# switchport hybrid ingress-filtering

Switch(config-if)# no switchport hybrid ingress-filtering

4.2.8 Switchport hybrid egress-tag

Command Description

- ✓ Switchport hybrid egress-tag <all | none>
- ✓ port hybrid egress-tag configuration
- ✓ No switchport hybrid egress-tag

Parameter

<all | none>, indicating egress port tag and untag attribute

Default

Untag Port vlan

Command Mode

Port Configuration Mode

Example

Switch(config)# switchport hybrid egress-tag all

Switch(config-if)# no switchport hybrid egress-tag

4.2.9 Switchport hybrid native

Command Description

Switchport hybrid native vlan <vlan-id> ,Configuration for hybrid port local vlan

Parameter

Vlan-id	Vlan ID ranges 1-4094
---------	-----------------------

Default

all

Command Mode Port Configuration Mode Example

Switch(config)# Switchport hybrid native vlan 2

4.2.10 show vlan

Command Description

show vlan brief |id vlan-list| ip-subnet | mac |name | protocol | status

Parameter

For checking current vlan configuration according to vlan id & vlan name etc.

Default

N/A

Command Mode

Privilege Mode

Example

Switch# show vlan brief

Switch# show vlan status

Switch# show vlan 2

Switch# show vlan ip-subnet

4.3 VCL Configuration

VCL Configuration Command :

- switchport vlan mac
- switchport vlan ip-subnet
- switchport vlan mapping
- switchport vlan protocol

4.3.1 switchport vlan mac

Command Description

- ✓ switchport vlan mac
- ✓ according to the vlan of MAC

- ✓ no switchport vlan mac

Parameter

N/A

Default

N/A

Command Mode

Port Configuration Mode

Example

```
Switch(config-if)# switchport vlan mac 00-00-00-00-00-01 vlan 2
```

```
Switch(config-if)# no switchport vlan mac 00-00-00-00-00-01 vlan 2
```

4.3.2 switchport vlan ip-subnet

Command Description

- ✓ switchport vlan ip-subnet, according to the vlan of sub network mask
- ✓ no switchport vlan ip-subnet, Delete the configuration according to the vlan of ip-subnet

Parameter

N/A

Default

N/A

Command Mode

Port Configuration Mode

Example

```
Switch(config-if)# switchport vlan ip-subnet id 1 10.0.0.1/255.255.255.0 vlan 1
```

```
Switch(config-if)# no switchport vlan ip-subnet id 1
```

4.3.3 switchport vlan protocol

Command Description switchport vlan protocol, Configure the mapping of group name to vlan no switchport vlan mac

Parameter

```
switchport vlan protocol group <group_name> vlan <vlan_id>
```

Default

N/A

Command Mode

Port Configuration Mode

Example

```
Switch(config-if)# switchport vlan protocol group test vlan 2
```

```
Switch(config-if)# no switchport vlan protocol group test vlan 2
```

4.3.4 vlan protocol

Command Description

- ✓ vlan protocol eth2| llc | snap, Configure the mapping of protocol to group
- ✓ no vlan protocol

Parameter

eth2	Ethernet-based VLAN commands	llc	LLC-based VLAN group	snap	SNAPbased VLAN group
------	------------------------------	-----	----------------------	------	----------------------

Default

N/A

Command ModeGlobal Configuration Mode

Example

```
Switch(config)# vlan protocol snap 0xE02B 0x1 group test
```

```
Switch(config)# no vlan protocol snap 0xE02B 0x1 group test
```

4.4 DHCP Snooping Configuration

DHCP Snooping Configuration Command :

- ip dhcp snooping
- ip dhcp snooping trust
- show ip dhcp snooping table

4.4.1 ip dhcp snooping Command Description ip

dhcp snooping, Enable DHCP Snooping no ip dhcp

snooping, Disable DHCP Snooping Parameter

N/A

Default

Disable

Command ModeGlobal Configuration Mode

Example

Switch(config)# ip dhcp snooping

Switch(config)# no ip dhcp snooping

4.4.2 ip dhcp snooping trust Command Description ip

dhcp snooping trust, Enable DHCP snooping trust no ip dhcp snooping trust, Disable DHCP snooping

Parameter

N/A

Default

Enable

Command ModePort Configuration Mode

Example

Switch(config-if)# ip dhcp snooping trust

Switch(config-if)# no ip dhcp snooping trust

4.4.3 show ip dhcp snooping table

Command Description

show ip dhcp snooping table, For checking DDHCP Snooping table

Parameter

N/A

Default

N/A

Command ModeGlobal Configuration Mode

Example

Switch(config)# ip dhcp snooping

Switch(config)# no ip dhcp snooping

4.4.4 show ip dhcp snooping interface

Command Description

show ip dhcp snooping interface, For checking DHCP Snooping trust mode

Parameter

N/A

Default

N/A

Command Mode

Privilege Mode

Example

```
Switch# show ip dhcp snooping interface GigabitEthernet 1/1
```

4.5 DHCP Server Configuration

DHCP Server Configuration Command :

```
ip dhcp server ip
```

```
dhcp pool
```

```
host/network lease
```

```
time default-router
```

```
dns
```

```
Switch#show ip dhcp
```

4.5.1 ip dhcp server

Command Description

- ✓ ip dhcp server, Enable DHCP
- ✓ no ip dhcp server, Disable DHCP

Parameter

N/A

Default

Disable

Command Mode

Global Configuration Mode/vlan Port Configuration ModeExample

```
Switch(config)# ip dhcp server
```

```
Switch(config)# no ip dhcp server
```

```
Switch(config)# interface vlan 2
```

```
Switch(config-if-vlan)# ip dhcp server //Enable DHCP server allocating IP under vlan 2
```

```
Switch(config-if-vlan)# no ip dhcp server // disable DHCP server allocating IP under vlan 2
```

4.5.2 ip dhcp pool Command Description

ip dhcp pool <word>, Add dhcp address pool name ip dhcp pool <word>, Delete specified name
DHCP address pool

Parameter

N/A

Default

N/A

Command Mode

Global Configuration Mode

Example

```
Switch(config)# ip dhcp pool vlan2_test1
```

```
Switch(config)# no ip dhcp pool vlan2_test1
```

4.5.3 ip dhcp excluded-address

Command Description

ip dhcp excluded-address, Setting DHCP excluded IP address

no ip dhcp excluded-address, Delete DHCP specified excluded IP address, excluding the DHCP Client, whose IP is not under the port.

Parameter N/A

Default

N/A

Command Mode

Global Configuration Mode

Example

```
Switch(config)# ip dhcp excluded-address 1.0.0.1 1.0.0.2
```

```
Switch(config)#no ip dhcp excluded-address 1.0.0.1 1.0.0.2
```

4.5.4 host/network

Command Description

Host <ip><subnet_mask>, Configure IP DHCP pool.

Network <ip><subnet_mask>,Configure DHCP pool IP network segment(Max support 1K, could be extending to 4K)

No host|network <ip><subnet_mask>, Delete DHCP Pool IP or network segment.

Parameter

<ip><subnet_mask>, Indicating IP address and subnet mask respectively

Default

N/A

Command Mode

DHCP Pool Configuration Mode

Example

```
Switch(config)# ip dhcp pool test_pool
```

```
Switch(config-dhcp-pool)# host 3.0.0.1 255.0.0.0
```

```
Switch(config-dhcp-pool)# network 1.0.0.1 255.0.0.0
```

4.5.5 lease time

Command Description lease { <day> [<hour> [<min>]] | infinite } , Configure address

DCHP pool IP lease

Parameter

{ <day> [<hour> [<min>]] | infinite } Default

infinite

Command Mode

DHCP Pool Configuration Mode

Example

```
Switch(config-dhcp-pool)# lease infinite
```

```
Switch(config-dhcp-pool)# lease 1 0 0
```

4.5.6 dns

Command Description

Dns <A.B.C.D>, Configure DNS

Parameter

<A.B.C.D>, dns address

Default

N/A

Command Mode

DHCP Pool Configuration Mode

Example

```
Switch(config-dhcp-pool)# dns 8.8.8.8
```

4.5.7 Default-router

Command Description

Default-router <A.B.C.D>, Configure DHCP Pool default gateway

Parameter

<A.B.C.D>, IP address of the gateway

Default

N/A

Command Mode

DHCP Pool Configuration Mode

Example

```
Switch(config-dhcp-pool)# default-router 1.0.0.100
```

4.5.8 Show ip dhcp

Command Description

Show ip dhcp pool|server, For checking IP DHCP pool and server configuration

Parameter

N/A

Default

N/A

Command Mode

Privilege Mode

Example

```
Switch# Show ip dhcp pool
```

```
Switch# Show ip dhcp server
```

4.6 DHCP relay Configuration

DHCP relay Configuration Command :

- ip dhcp relay
- ip helper-address
- ip dhcp relay information option
- ip dhcp relay information policy
- show ip dhcp relay

4.6.1 ip dhcp relay

Command Description

- ✓ ip dhcp relay, Enable the DHCP relay

- ✓ no ip dhcp relay, Disable the DHCP replay

Parameter

N/A

Default

Disable

CommandMode

Global Configuration Mode

Example

```
Switch(config)# ip dhcp relay
```

```
Switch(config)# no ip dhcp relay
```

4.6.2 ip helper-address

Command Description

ip helper-address ip_addr, Configure IP of relay server

Parameter

N/A

Default

N/A

Command Mode

Global Configuration Mode

Example

```
Switch(config)# ip helper-address 1.0.0.1
```

4.6.3 ip dhcp relay information option Command Description

- ✓ ip dhcp relay information option, Enable DHCP relay option mode
- ✓ no ip dhcp relay information option, disable DHCP relay option mode

Parameter

N/A

Default

Disable

Command Mode

Global Configuration Mode

Example

```
Switch(config)# ip dhcp relay information option
```

```
Switch(config)# no ip dhcp relay information option
```

4.6.4 ip dhcp relay information policy

Command Description

ip dhcp relay information policy {Replace|Keep|Drop},

Configure DHCP relay information policy

Parameter

N/A

Default

N/A

Command Mode Global Configuration Mode

Example

```
Switch(config)# ip dhcp relay information policy drop
```

4.6.5 Show ip dhcp relay

Command Description

Show ip dhcp relay, For checking DHCP Relay Configuration

Parameter

N/A

Default

N/A

Command Mode

Privilege Mode

Example

```
Switch# show ip dhcp relay
```

4.7 IGMP Snooping Configuration

igmp-snooping Configuration Command : ip igmp-snooping ip igmp-snooping vlan ip igmpsnooping immediate-leave ip igmp-snooping max-groups ip igmp-snooping mrouter ip igmpsnooping querier election ip igmp-snooping querier address ip igmp-snooping compatibility ip igmp-snooping priority ip igmp snooping robustness-variable ip igmp-snooping query-interval ip igmp-snooping query-max-response-time ip igmp-snooping last-member-query-interval ip igmp-snooping unsolicited-report-interval show ip igmp-snooping

4.7.1 ip igmp-snooping

Command Description

- ✓ ip igmp-snooping Enable the igmp-snooping
- ✓ no ip igmp-snooping Disable ip igmp-snooping

Parameter

N/A

Default

Disable

Command Mode

Global Configuration Mode, VLAN Configuration Mode or Configure this command under Port Configuration Mode

Example

Enable igmp-snooping

`Switch (config)# ip igmp snooping`

4.7.2 ip igmp-snooping vlan

Command Description

- ✓ ip igmp-snooping vlan <vlan_list> add IGMP Vlan
- ✓ no ip igmp-snooping vlan <vlan_list> Delete IGMP Vlan

Parameter

Parameter	ParameterCommand Mode
vlan_list	VLAN ID

Default

N/A

Command Mode

Configure this command under Global Configuration Mode

Example add IGMP VLAN

`Switch (config)# ip igmp snooping vlan 1`

4.7.3 ip igmp-snooping immediate-leave

Command Description

- ✓ ip igmp-snooping immediate-leave Enable the function .
- ✓ no ip igmp-snooping immediate-leave Disable the function

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Port Configuration Mode

Example for Enable the function

`Switch (config-if)# ip igmp snooping immediate-leave`

4.7.4 ip igmp-snooping max-groups

Command Description

`ip igmp-snooping max-groups <Throttling : 1-10>`

For setting throttling numbers of port no ip igmp-snooping max-groups

For setting to default

Parameter

Parameter	Parameter Command Mode
Throttling	Ranges 1-10

Default unlimited

Command Mode

Configure the command under Port Configuration Mode Example for Setting Throttling of port at 10

`Switch (config-if)# ip igmp snooping max-groups 10`

4.7.5 ip igmp-snooping mrouter

Command Description

`ip igmp-snooping mrouter ,` Enable the function

`no ip igmp-snooping mrouter` Disable the function

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Port Configuration Mode

Example for Enable the function

`Switch (config-if)# ip igmp snooping mrouter`

4.7.6 ip igmp-snooping querier election

Command Description

- ✓ ip igmp-snooping querier election Enable the function
- ✓ no ip igmp-snooping querier election Disable the function

Parameter

N/A

Default

Disable

Command Mode

Configure the command under VLAN Configuration Mode

Example for enable the function

`Switch (config-if-vlan)# ip igmp snooping querier election`

4.7.7 ip igmp-snooping querier address

Command Description

- ✓ ip igmp-snooping querier address<ipv4_ucast> For setting ip igmp-snooping querier address
- ✓ no ip igmp-snooping querier address For setting to default

Parameter

Parameter	Parameter Command Mode
ipv4_ucast	querier address

Default

0.0.0.0

Command Mode

Configure the command under Vlan configuration mode

Example for setting ip igmp-snooping querier address

`Switch (config-if-vlan)# ip igmp snooping querier address 192.168.2.1`

4.7.8 ip igmp-snooping compatibility

Command Description

- ✓ ip igmp-snooping compatibility auto/v1/v2/v3 For Setting IGMP compatibility in IGMP VLAN

- ✓ no ip igmp-snooping compatibility Setting IGMP compatibility in IGMP VLAN to default

Parameter

N/A

Default

IGMP-auto

Command Mode

Configure the command under VLAN configuration Mode

Example for setting IGMP in VLAN into Forced IGMP V1

Switch (config-if-vlan)# ip igmp snooping compatibility v1

4.7.9 ip igmp-snooping priority

Command Description

- ✓ ip igmp-snooping priority <CosPriority : 0-7> For setting the priority
- ✓ no ip igmp-snooping priority

For setting the priority to default

Parameter

Parameter	Parameter Command Mode
CosPriority	Priority Level Ranges 07

Default

0

Command Mode

Configure the command under VLAN configuration mode

Example for setting priority level

Switch (config-if-vlan)# ip igmp snooping priority 7

4.7.10 ip igmp snooping robustness-variable

Command Description

ip igmp-snooping robustness-variable <IpmcRv : 1-255> For setting RV

no ip igmp-snooping robustness-variable Setting RV to default

Parameter

Parameter	Parameter Command Mode
IpmcRv	RV ranges 1-255

Default

2

Command Mode

Configure the command under VLAN configuration mode

Example for setting RV

`Switch (config-if-vlan)# ip igmp snooping robustness-variable 7`

4.7.11 ip igmp-snooping query-interval

Command Description

`ip igmp-snooping query-interval <IpMcQi : 1-31744>` For setting QI

`no ip igmp-snooping query-interval` For setting QI to default

Parameter

Parameter	Parameter Command Mode
IpMcQi	QI ranges 1-31744

Default

125

Command Mode

Configure the command under VLAN configuration mode

Example for setting QI

`Switch (config-if-vlan)# ip igmp snooping query-interval 70`

4.7.12 ip igmp-snooping query-max-response-time

Command Description

- ✓ `ip igmp-snooping query-max-response-time <IpMcQri : 0-31744>` For setting QRI
- ✓ `no ip igmp-snooping query-max-response-time` For setting QRI to default

Parameter

Parameter	Parameter Command Mode
IpMcQri	QRI Ranges 0-31744

Default

100

Command Mode

Configure the command under VLAN configuration mode

Example for setting ORI

Switch (config-if-vlan)# ip igmp snooping query-interval 110

4.7.13 ip igmp-snooping last-member-query-interval

Command Description

- ✓ ip igmp-snooping last-member-query-interval <IpmcLmqi : 0-31744> For setting LLQI
- ✓ no ip igmp-snooping last-member-query-interval

For setting LLQI to default

Parameter

Parameter	ParameterCommand Mode
IpmcLmqi	LLQI ranges 0-31744

Default

10

Command Mode

Configure the command under VLAN configuration mode

Example for setting LLOI

Switch (config-if-vlan)# ip igmp snooping last-member-query-interval 20

4.7.14 ip igmp-snooping unsolicited-report-interval

Command Description

- ✓ ip igmp-snooping unsolicited-report-interval <IpmcUri : 0-31744> For setting URI
- ✓ no ip igmp-snooping unsolicited-report-interval

For setting URI to default

Parameter

Parameter	ParameterCommand Mode
IpmcUri	URII ranges 0-31744

Default

10

Command Mode

Configure the command under VLAN configuration mode

Example for setting URI

`Switch (config-if-vlan)# ip igmp snooping last-member-query-interval 200`

4.7.15 show ip igmp snooping

Command Description

`show ip igmp snooping [/detail/group-database/mrouter/vlan`

For checking IGMP configuration

Parameter

N/A

Default N/A Command Mode

Configure the command under Privilege mode

Example for checking IGMP configuration

`Switch #show ip igmp snooping`

4.8 MVR configuration

MVR configuration command :

- `mvr`
- `mvr vlan`
- `mvr name`
- `mvr immediate-leave`
- `ipmc profile`
- `ipmc range`
- `show mvr`
- `show ipmc profile`
- `show ipmc range`

4.8.1 Mvr

Command Description

`Mvr`, Enable global MVR mode

`no mvr`, Disable global MVR mode

Parameter N/A

Default

Disable

Command ModeGlobal Configuration Mode

Example

Switch(config)# mvr

Switch(config)# no mvr

4.8.2 Mvr vlan

Command Description mvr vlan, Setting

MVR vlan port no mvr vlan, Delete mvr vlan

port settings Parameter

```
mvr vlan <v_vlan_list> [ name <mvr_name> ]      mvr vlan <v_vlan_list> channel <profile_name>
mvr vlan <v_vlan_list> frame priority <cos_priority>      mvr vlan <v_vlan_list> frame tagged
mvr vlan <v_vlan_list> igmp-address <v_ipv4_ucast>      mvr vlan <v_vlan_list> last-member-query-
interval <ipmc_lmqi>      mvr vlan <v_vlan_list> mode { dynamic | compatible }
```

Default

N/A

Command ModeGlobal Configuration Mode

Example

Switch(config)# mvr vlan 2 name test

Switch(config)# mvr vlan 2 mode compatible

4.8.3 Mvr name

Command Description mvr

name, Setting MVR name no mvr

name, Delete MVR name

Parameter

```
mvr name <mvr_name> channel <profile_name>      mvr name <mvr_name> frame priority
<cos_priority>      mvr name <mvr_name> frame tagged      mvr name <mvr_name> igmp-address
<v_ipv4_ucast>      mvr name <mvr_name> last-member-query-interval <ipmc_lmqi>      mvr name
<mvr_name> mode { dynamic | compatible } DefaultN/A
```

Command ModeGlobal Configuration Mode

Example

Switch(config)# mvr name test igmp-address 222.0.0.1

Switch(config)# no mvr name test igmp-address 222.0.0.1

4.8.7 show mvr

Command Description

Show mvr, For checking MVR configuration

Parameter

N/A

Default

N/A

Command Mode

Privilege Mode

Example

[Switch # Show mvr](#)

4.8.8 show ipmc profile

Command Description

Show ipmc profile, For checking ipmc profile configuration

Parameter

N/A

Default

N/A

Command Mode

Privilege Mode

Example

[Switch # Show ipmc profile](#)

4.9 Router Configuration

Router Configuration Command :

- ip routing
- interface vlan
- ip address ip route
- show ip interfacebrief
- show ip route

4.9.1 ip routing

Command Description

- ✓ ip routing , Enable the function

- ✓ no ip routing, Disable the function

Parameter

N/A

Default

Host-only mode

Command Mode

Configure the command under Global Configuration Mode

Example for enable ip routing

`Switch (config)#ip routing`

4.9.2 interface vlan

Command Description

`interface vlan<vlan_id>`

Parameter

Parameter	Parameter Command Mode
vlan_id	Vlan port ID ranges : vlan1-vlan4094.

Default

N/A

Command Mode

Under Global Configuration Mode, use command mode and this command, could be access to vlan Port Configuration Mode

Example

Below command to VLAN1 Port Configuration Mode:

`switch(config)# interface vlan1`

`switch(config-if-vlan)# ip address 192.168.1.1 255.255.255.0`

4.9.3 ip address

Command Description

`<address><netmask>` For adding IP

of port no ip address

For deleting IP of port

Parameter

Parameter	ParameterCommand Mode
Address	Vlan IP address
Netmask	subnet mask

Default

VLAN 1

Command Mode

Configure the command under VLAN Port Configuration Mode

Example for setting IP of VLAN 2

```
switch(config)# interface vlan 2
```

```
switch(config-if-vlan)# ip address 192.168.1.1 255.255.255.0
```

4.9.4 ip route

Command Description

ip route <v_ipv4_addr><v_ipv4_netmask><v_ipv4_gw><v_nhop_vlanid> For adding a static route no ip route

Delete a static route

Parameter

Parameter	ParameterCommand Mode
v_ipv4_addr	IP
v_ipv4_netmask	Subnet mask
v_ipv4_gw	Gateway
v_nhop_vlanid	next VLAN

Default

N/A

Command Mode

Configure the command under Global Configuration Mode Example for setting a static route

```
switch(config)# ip route 192.168.3.0 255.255.255.0 192.168.100.100 2
```

4.9.5 show ip interface brief

Command Description

show ip interface brief

For checking IP of port

Parameter

N/A

Default

N/A

Command Mode

Configure the command under Privilege mode

Example for checking IP of port

`Switch#show ip interface brief`

4.9.6 show ip route

Command Description

show ip route

For checking static route

Parameter

N/A

Default

N/A

Command Mode

Configure the command under Privilege mode

Example for checking static route

`Switch#show ip route`

Chapter 5 Network Security Command

5.1 MAC address table

MAC address table configuration command : mac address-

table static mac address-table aging-time

show mac address-table

5.1.1 mac address-table static

Command Description

mac address-table static mac-addr vlan vlan-id interface interface-id For adding a static MAC address
 no mac address-table static mac-addr vlan vlan-id interface interface-id For deleting a static MAC address

Parameter

Parameter	ParameterCommand Mode
mac-addr	MAC address
vlan-id	VLAN ID ranges for the MAC : 1–4094。
interface-id	All ports ID for the MAC

Default

N/A

Command Mode

Configure the command under Global Configuration Mode

Example for setting MAC < 00-00-00-00-00-01 > bond to Port 10 under VLAN 2

`Switch(config)# mac address-table static 00-00-00-00-00-01 vlan 2 interface 1/10`

5.1.2 mac address-table aging-time

Command Description

mac address-table aging-time For setting the aging time of the MAC address

no mac address-table aging-time

For setting the MAC address aging time to default

Noted: If the value is 0, it indicates disable the automatic aging function

Parameter

Parameter	ParameterCommand Mode
Time	Aging time ranges : <0,10-1000000>

Default

N/A

Command Mode

Configure the command under Global Configuration Mode

Example for setting the MAC address table aging time at 200s

`Switch(config)# mac address-table aging-time 200`

5.1.3 show mac address-table

Command Description

show mac address-table {address | aging-time | conf | count | learning |[interface interface-id | vlan vlan-id] | static}

For showing the MAC address table content of switch

Parameter

Parameter	ParameterCommand Mode
Address	Mac address checking
aging-time	Mac address table aging time。
Conf	For added static MAC address by user
Count	Total numbers of MAC address
Learning	Mac learning status
interface-id	Port name
vlan-id	VLAN ID valid ranges : 1 –4094。
Static	Static MAC address table

DefaultN/A

Command Mode

Using the command to show MAC address table under Privilege Mode

Example for showing all MAC address tables

`Switch# show mac address-table`

5.2 Storm Broadcast control

Command Description

qos storm broadcast /unicast /unknown Enable the function

no qos storm broadcast /unicast /unknown Disable the function

Parameter

Parameter	ParameterCommand Mode
Broadcast	Broadcast data
Unicast	Single broadcast data
Unknown	Undefined Single broadcast data

Default

Disable

Command Mode

Configure the command under Port Configuration Mode

Example for enable Storm Broadcast control at Port 10

```
Switch(config)# interface GigabitEthernet 1/10
```

```
Switch (config-if)# qos storm broadcast
```

5.3 IP VerifySource IP Verify Source

Command Description

ip verify source ip verify

source translate ip verify

source limit

ip source binding interface

```
Switch # show ip verify source
```

5.3.1 ip verify source

Command Description

ip verify source Enable IP verify source

no ip verify source Disable IP verify source

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Global Configuration Mode

Example for enable IP verify source

```
Switch (config)# ip verify source
```

5.3.2 ip verify source translate

Command Description

ip verify source translate

For translating dynamic entry to static entry no ip

verify source translate

For cancel the translations

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Global Configuration Mode

Example

`Switch (config)# ip verify source translate`

5.3.3 ip verify source limit

Command Description

`ip verify source limit <0-2>`

For limit the numbers of the dynamic client

`no ip verify source limit` For setting the limit to default

Parameter

Parameter	ParameterCommand Mode
<0-2>	Number ranges of dynamic client<0-2>

Default

Unlimited

Command Mode

Configure the command under Port Configuration Mode

Example

`Switch (config)# interface GigabitEthernet 1/1`

`Switch (config-if)# ip verify source limit 2`

5.3.4 ip source binding interface

Command Description ip source binding interface

`<port_type><in_port_type_id><vlan_var>`

`<ipv4_var><mask_var>`

For adding numbers of the static entry no ip source binding

`interface<port_type><in_port_type_id><vlan_var>`

<ipv4_var><mask_var>

For deleting numbers of the static entry

Parameter

Parameter	ParameterCommand Mode
port_type	Port type
in_port_type_id	Port ID
vlan_var	vlan ID
ipv4_var	ip address
mask_var	Subnet mask

Default

N/A

Command Mode

Configure the command under Global Mode

Example for adding a static item, whose Port ID is 1, Vlan ID is 1, IP address is 192.168.2.66, and the subnet mask is 255.255.255.0

[Switch\(config\)#ip source binding interface GigabitEthernet 1/1 1 192.168.2.66 255.255.255.0](#)

5.3.5 show ip verify source

Command Description show ip

verify source

For checking IP verify source configuration status

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Privilege mode

Example for checking enable IP verify source configuration status

[Switch# show ip verify source](#)

5.4 ARP Inspection Configuration

ARP Testing Configuration Command :

ip arp inspection ip arp inspection trust ip arp inspection checking-vlan ip arp inspection logging ip arp inspection entry interface ip arp inspection translate ip arp inspection vlan show ip arp inspection

5.4.1 ip arp inspection

Command Description

- ✓ ip arp inspection Enable the IP ARP inspection
- ✓ no ip arp inspection Disable IP ARP inspection

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Global Configuration Mode

Example for enable ARP inspection

```
Switch(config)# ip arp inspection
```

5.4.2 ip arp inspection trust

Command Description

- ✓ ip arp inspection trust Disable ARP inspection for port
- ✓ no ip arp inspection trust Enable the ARP inspection for port

Parameter

N/A

Default

Disable the function

Command Mode

Configure the command under Port Configuration Mode

Example for enable IP ARP inspection of port 10

```
Switch (config-if)# no ip arp inspection trust
```

5.4.3 ip arp inspection checking-vlan

Command Description

- ✓ ip arp inspection checking-vlan Enable ARP inspection checking-VLAN
- ✓ no ip arp inspection checking-vlan Disable ARP inspection checking-VLAN

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Port Configuration Mode

Example for enable ARP inspection checking-VLAN of port 10

`Switch (config-if)# ip arp inspection checking-vlan`

5.4.4 ip arp inspection logging

Command Description

- ✓ `ip arp inspection logging all/deny/permit` For setting Port logging type
- ✓ `no ip arp inspection logging` For setting port logging type to default

Parameter

Parameter	ParameterCommand Mode
All	All
Deny	Deny
Permit	Permit

Default

N/A

Command Mode

Configure the command under Port Configuration Mode

Example setting logging type to “Permit” of port 10

`Switch (config-if)# ip arp inspection logging permit`

5.4.5 ip arp inspection entry interface

Command Description

`ip arp inspection entry interface <port_type><in_port_type_id><vlan_var>
<mac_var><ipv4_var>`

For adding static entry `no ip arp inspection entry interface`

`<port_type><in_port_type_id><vlan_var>
<mac_var><ipv4_var>`

For deleting static entry

Parameter

Parameter	ParameterCommand Mode
port_type	Port type
port_type_id	Port ID
vlan_var	VLAN ID
mac_var	MAC
ipv4_var	IP address

Default

N/A

Command Mode

Configure the command under Global Configuration Mode

Example for adding a static entry

```
Switch(config)# ip arp inspection entry interface GigabitEthernet 1/1 1 00:00:00:00:00:08 192.168.2.3
```

5.4.6 ip arp inspection translate

Command Description

```
ip arp inspection translate [ interface <port_type><in_port_type_id>
<vlan_var><mac_var><ipv4_var> ]
```

For translating dynamic entry to static entry.

```
no ip arp inspection translate [ interface <port_type><in_port_type_id>
<vlan_var><mac_var><ipv4_var> ]
```

For cancel translated entry

Parameter

Parameter	ParameterCommand Mode
port_type	Port type
port_type_id	Port ID
vlan_var	VLAN ID
mac_var	MAC Address
ipv4_var	IP Address

Default

N/A

Command Mode

Configure the command under Global Configuration Mode

Example for translating all dynamic entry to static entry

`Switch (config)# ip arp inspection translate`

5.4.7 ip arp inspection vlan

Command Description

`ip arp inspection vlan <in_vlan_list> logging { deny | permit | all }` For

setting VLAN logging type no ip arp inspection vlan <in_vlan_list>

`logging { deny | permit | all }`

For setting VLAN logging type to default

Parameter

Parameter	Parameter Command Mode
All	all
Deny	deny
Permit	permit

Default

N/A

Command Mode

Configure the command under Global Configuration Mode

Example for setting vlan 1 logging type at deny

`Switch (config)# ip arp inspection vlan 1 logging deny`

5.4.8 show ip arp inspection

Command Description

`show ip arp inspection entry/interface/vlan`

For checking ARP inspection related information configuration

Parameter

N/A

Default

N/A

Command Mode

Configure the command under Privilege mod

Example for checking ARP inspection configuration

Switch # show ip arp inspection

5.5 ACL Configuration

ACL configuration command :

- access-list ace
- show access-list

5.5.1 access-list ace

Command Description

access-list ace , configuration for acl ace entry no

access-list ace, Delete acl ace entry

Parameter

Ace id ace entry id, ranges 1-512 action permit/deny dmac-type

frame-type ingress interface logging logging frame information next

Add a new ACE entry at current ACE entry policy Policy

configuration selection rate-limiter rate limit, this will occupy the rate limiter in

bandwidth policy redirect Port redirection configuration selection shutdown

Shut down port configuration selection

tag-priority vlanTag priority level configuration selection vid

VID filter domain configuration selection

Default

Shutdown

Command Mode

Global Configuration Mode

Example

Switch(config)# access-list ace 1 ingress interface GigabitEthernet 1/1 frame-type ipv4 action deny rate-limiter 1 redirect interface GigabitEthernet 1/2 logging

Switch(config)# no access-list ace 1

5.5.2 Show access-list

Command Description

Show access-list , For checking ace configuration information Parameter

```
show access-list [ interface [ ( <port_type> [ <v_port_type_list> ] ) ] ]  
[ rate-limiter [ <rate_limiter_list> ] ] [ ace statistics [ <ace_list> ] ] show access-list ace-status  
[ static ] [ link-oam ] [ loop-protect ] [ dhcp ] [ ptp ] [ upnp ] [ arp-inspection ] [ evc ] [ mep ] [ ipmc ] [ ip-source-guard ] [ ip-mgmt ] [ conflicts ]  
[ switch <switch_list> ]
```

Default

Shutdown

Command Mode

Privilege Configuration Mode

Example

```
Switch# show access-list ace statistics
```

```
Switch# show access-list ace
```

5.6 STP Configuration

STP Configuration Command :

```
spanning-tree spanning-tree mode spanning-tree aggregation spanning-tree auto-edge spanning-tree  
bpdu-guard spanning-tree edge spanning-tree link-type spanning-tree mst spanning-tree restricted-role  
spanning-tree restricted-tcn
```

5.6.1 spanning-tree

Command Description

spanning-tree Enable

STP no spanning-tree

Disable STP

Parameter

N/A

Default

Enable

Command Mode

Configure the command under Port Configuration Mode or aggregate port configuration mode

Examplefor enable STP of port 10 and STP of aggregate port

```
Switch (config-if) #spanning-tree
```

[Switch \(config-stp-aggr\)# spanning-tree](#)

5.6.2 spanning-tree mode

Command Description

- ✓ spanning-tree mode stp/mstp/rstp For setting STP version
- ✓ no spanning-tree mode For setting STP version to default

Parameter

N/A Default

mstp

Command Mode

Configure the command Global Configuration Mode

Example for modifying STP version to RSTP

[Switch \(config\) #spanning-tree mode rstp](#)

5.6.3 spanning-tree aggregation

Command Description

spanning-tree aggregation, For accessing to aggregate port STP configuration mode

Parameter

N/A

Default

N/A

Command Mode

Configure the command under Global Configuration Mode

Example for accessing aggregate port STP configuration mode

[Switch \(config\) #spanning-tree aggregation](#)

5.6.4 spanning-tree auto-edge

Command Description

- ✓ spanning-tree auto-edge For enable auto-edge
- ✓ no spanning-tree auto-edge For disable auto-edge

Parameter

N/A

Default

Enable

Command Mode

Configure the command under Port Configuration Mode or aggregate port configuration mode

Example for enable the auto-edge function of port 10 and aggregate port

`Switch (config-if) #spanning-tree auto-edge`

`Switch (config-stp-aggr)# spanning-tree auto-edge`

5.6.5 spanning-tree bpdu-guard

Command Description

- ✓ `spanning-tree bpdu-guard` Enable BPDU Guard
- ✓ `no spanning-tree bpdu-guard` Disable BPDU Guard

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Port Configuration Mode or Aggregate Port Configuration mode

Example for enable BPDU Guard of port 10 and aggregate port

`Switch (config-if) #spanning-tree bpdu-guard`

`Switch (config-stp-aggr)# spanning-tree bpdu-guard`

5.6.6 spanning-tree edge

- ✓ `spanning-tree edge` Enable management of edge function
- ✓ `no spanning-tree edge` Disable management of edge function

Parameter

N/A

Default

Non-Edge

Command Mode

Configure the command under Port Configuration Mode or Aggregate Port configuration Mode

Example for enable management of edge function of port 10 and aggregate port

`Switch (config-if) #spanning-tree edge`

Switch (config-stp-aggr)# spanning-tree edge

5.6.7 spanning-tree link-type

Command Description

- ✓ spanning-tree link-type auto/ point-to-point/ shared For configuring point-to-point type
- ✓ no spanning-tree link-type For configuring point-to point type to default

Parameter

Parameter	ParameterCommand Mode
Auto	auto for corresponding web interface
point-to-point	forced true for corresponding webinterface
shared	forced false for corresponding web interface

Default auto

Command Mode

Configure the command under Port Configuration Mode or Aggregate port configuration mode

Examplefor configuring point-to-point type to forced true of port 10 and aggregate port

Switch (config-if)# spanning-tree link-type point-to-point

Switch (config-stp-aggr)# spanning-tree link-type point-to-point

5.6.8 spanning-tree mst

Command Description

spanning-tree mst <instance> cost { <cost> | auto } For

setting path cost no spanning-tree mst <instance> cost {

<cost> | auto } For setting path cost to default spanning-tree

mst <instance> port-priority <prio> For setting port priority

no spanning-tree mst <instance> port-priority <prio>

For setting port priority back to default

Parameter

Parameter	ParameterCommand Mode
instance	Ranges 0-7
Cost	Integer of the ranges 1200000000

Prio	Ranges 0-240
------	--------------

Default

N/A

Command Mode

Configure the command under Port Configuration Mode or aggregate port configuration configuration mode

Example for setting path cost of port 10 and aggregate port

`Switch (config-if) # spanning-tree mst 1 cost 144`

`Switch (config-stp-aggr)# spanning-tree mst 1 cost 144`

5.6.9 spanning-tree restricted-role

Command Description

- ✓ `spanning-tree restricted-role` Enable restricted role
- ✓ `no spanning-tree restricted-role` Disable restricted role

Parameter N/A

Default

Disable

Command Mode

Configure the command under Port Configuration Mode or aggregate port configuration mode

Example for enable restricted role of port 10 and aggregate port

`Switch (config-if) # spanning-tree restricted-role`

`Switch (config-stp-aggr)# spanning-tree restricted-role`

5.6.10 spanning-tree restricted-tcn

Command Description

`spanning-tree restricted- tcn`

Enable restricted tcn no spanning-
tree restricted- tcn

Disable restricted tcn

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Port Configuration Mode or Aggregate port configuration mode

Example for enable restricted tcn of port 10 and aggregate port

```
Switch (config-if) # spanning-tree restricted- tcn
```

```
Switch (config-stp-aggr)# spanning-tree restricted- tcn
```

5.6.11 show spanning-tree

Command Description

```
show spanning-tree [/active/ detailed/ interface / mst / summary
```

For checking STP related configuration

Parameter

N/A

Default

N/A

Command Mode

Configure the command under Privilege Configuration Mode

Example for checking STP configuration status

```
Switch # show spanning-tree
```

5.7 Loop-protect configuration

Loop-protect configuration command

```
loop-protect loop-protect tx-mode
```

5.7.1 loop-protect

Command Description

- ✓ loop-protect Enable loop-protect
- ✓ no loop-protect Disable loop-protect

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Global Configuration Mode

Example for enable loop-protect

[Switch \(config\) # loop-protect](#)

5.7.2 loop-protect tx-mode

Command Description

- ✓ loop-protect tx-mode Enable loop-protect tx-mode
- ✓ no loop-protect tx-mode Disable loop-protect tx-mode

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Port Configuration Mode

Example for enable loop-protect tx-mode

[Switch \(config-if\) #loop-protect tx-mode](#)

5.8 ERPS configuration

ERPS configuration command :

- ✓ Mep
- ✓ Erps

Noted: command for erps is complicated, suggest to configured by web. More easier to do. 5.8.1

mep

Command Description

Reference to

Example

ParameterReference to

Example

DefaultReference to

Example

Command Mode

Global Mode

Example

//Configure Port 1, 2 into ERPS group 1, protocol vlan3001, the major port without configuring

[Switch\(cinfig\)# mep 1 down domain port flow 1 level 0 interface GigabitEthernet 1/1](#)

```
Switch(cinfig)# mep 1 vid 3001
Switch(cinfig)# mep 1 aps 0 raps
Switch(cinfig)# mep 2 down domain port flow 2 level 0 interface GigabitEthernet 1/2
Switch(cinfig)# mep 2 vid 3001
Switch(cinfig)# mep 2 aps 0 raps
Switch(cinfig)# erps 1 major port0 interface GigabitEthernet 1/1 port1 interface GigabitEthernet 1/2
Switch(cinfig)# erps 1 mep port0 sf 1 aps 1 port1 sf 2 aps 2
Switch(cinfig)# erps 1 vlan 1
```

5.8.2 erps

Command Description

Reference to

Example

Parameter

Reference to Example

DefaultReference to Example Command

ModeGlobal Mode

Example// Configurate port 51, 52 into ERPS group 2, protocol vlan3002, Major port- port 0

```
Switch(cinfig)# mep 51 down domain port flow 51 level 0 interface XGigabitEthernet 1/3
```

```
Switch(cinfig)# mep 51 vid 3002
```

```
Switch(cinfig)# mep 51 aps 0 raps
```

```
Switch(cinfig)# mep 52 down domain port flow 52 level 0 interface XGigabitEthernet 1/4
```

```
Switch(cinfig)# mep 52 vid 3002
```

```
Switch(cinfig)# mep 52 aps 0 raps
```

```
Switch(cinfig)# erps 2 major port0 interface XGigabitEthernet 1/3 port1 interface XGigabitEthernet 1/4
```

```
Switch(cinfig)# erps 2 mep port0 sf 51 aps 51 port1 sf 52 aps 52
```

```
Switch(cinfig)# erps 2 rpl owner port0
```

```
Switch(cinfig)# erps 2 vlan 1
```

Chapter 6 Network Management Command

6.1 SSH Configuration

SSH Configuration Command :

```
ip ssh no
```

```
ip ssh
```

6.1.1 ip ssh

Command Description

```
ip ssh
```

For enable SSH no

```
ip ssh
```

For disable SSH, under this situation, cannot manage switch via SSH

Parameter

N/A

Default

N/A

Command Mode

Configure the command under Global Configuration Mode

Example for enable SSH

```
Switch(config)# ip ssh
```

6.2 HTTP Configuration HTTP

Configuration Command :

- ip http secure-server
- ip http-serve- redirect

6.2.1 ip http-server-server

Command Description

- ✓ ip http secure-server Enable the HTTP service
- ✓ no ip http secure-server Disable the HTTP service, at this situation, cannot manage switch via HTTPS

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Global Configuration Mode

Example for enable HTTPS service

```
Switch(config)# ip http server-server
```

6.2.2 ip http-server-redirect

Command Description

ip http-server- redirect

For setting switch redirect to https service automatically

no ip http-server- redirect

For delete the settings, won't redirect to HTTPS to manage the switch. But could manage switch via HTTP

Parameter

N/A

Default

Disable

Command Mode

Configure the command under Global Configuration Mode

Example for enable HTTPS-server redirect

```
Switch(config)# ip http-server- redirect
```

6.3 LLDP Configuration

LLDP Configuration command :

- lldp
- lldp holdtime
- lldp transmission-delay
- lldp timer
- lldp reinit
- show lldp neighbors

6.3.1 lldp

Command Description

lldp receive , Setting port LLDP receive lldp transmit , Setting port LLDP receive and transmit

No lldp receive|transmit, Shut down port LLDP receive/ transmit

Parameter

N/A

Default

Shut down

Command Mode

Port configuration mode

Example

```
Switch(config)# lldp receive
```

```
Switch(config)# lldp transmission-delay 1
```

```
Switch(config)# no lldp transmission-delay 1
```

6.3.2 lldp holdtime

Command Description

lldp holdtime, Setting LLDP transmit time for holdtime nolldp

holdtime, Setting LLDP transmit time for holdtime to default

Parameter

<time>, Valid ranges 2-10, second

Default

4

Command Mode

Global Configuration Mode

Example

```
Switch(config)# lldp timer 5
```

```
Switch(config)# no lldp timer 5
```

```
Switch# show lldp neighbors
```

6.4 802.1X Configuration

802.1x Configuration Command :

- dot1x system-auth-control
- dot1x port-control auto
- dot1x port-control mac-based
- dot1x port-control single
- dot1x port-control force-unauthorized
- dot1x re-authentication

- show dot1x statistics

Noted: It needs to shutdown STP of the port if needs enable 802.1x

6.4.1 dot1x system-auth-control

Command Description

- ✓ dot1x system-auth-control, This command could global enable 802.1x NAS
- ✓ no dot1x system-auth-control, This command could global disable 802.1x NAS

Parameter

N/A

Default

Shutdown

Command Mode

Global Configuration Mode

Example

```
Switch(config)# dot1x system-auth-control
```

```
Switch(config)# no dot1x system-auth-control
```

6.4.2 dot1x port-control auto

Command Description

- ✓ dot1x port-control auto, For setting port identification to Port_Based 802.1x
- ✓ no dot1x port-control, For setting port identification to default

Parameter

N/A

Default force-authorized

Command Mode

Port Configuration Mode

Example

```
Switch(config-if)# dot1x port-control auto
```

6.4.3 dot1x port-control mac-based

Command Description

dot1x port-control mac-based, For setting port identification to mac_Based 802.1x

no dot1x port-control , For setting port identification to default

Parameter

N/A

Default force-authorized

Command Mode Port Configuration Mode

Example

[Switch\(config-if\)# dot1x port-control mac-based](#)

6.4.4 dot1x port-control single

Command Description

- ✓ dot1x port-control single, For setting port identification to single 802.1x
- ✓ no dot1x port-control , For setting port identification to default

Parameter

N/A Default

force-authorized

Command Mode

Port Configuration Mode

Example

[Switch\(config-if\)# dot1x port-control single](#)

6.4.5 dot1x port-control force-unauthorized

Command Description

- ✓ dot1x port-control force-unauthorized, For setting port identification to force-unauthorized
- ✓ no dot1x port-control , For setting port identification to default

Parameter

N/A

Default

force-authorized

Command Mode

Port Configuration Mode

Example

[Switch\(config-if\)# dot1x port-control force-unauthorized](#)

6.4.6 dot1x re-authentication

Command Description

dot1x re-authentication , Global enable port re-authentication

no dot1x re-authentication, Global disable port re-authentication

Parameter

N/A

Default

Shutdown

Command Mode Global Configuration Mode

Example

```
Switch(config)# dot1x re-authentication
```

```
Switch(config)# no dot1x re-authentication
```

6.4.7 dot1x authentication timer re-authenticate

Command Description

- ✓ dot1x authentication timer re-authenticate <1-3600> , Global configure port reauthentication time
- ✓ no dot1x authentication timer re-authenticate, configure port re-authentication time to default

Parameter

<1-3600> 1-3600, second

Default

3600

Command Mode

Global Configuration Mode

Example

```
Switch(config)# dot1x authentication timer re-authenticate 1000
```

```
Switch(config)# no dot1x authentication timer re-authenticate
```

6.4.8 show dot1x statistics

Command Description

show dot1x statistics, For checking port identification statistics

Parameter

N/A

DefaultN/A

Command Mode

Privilege configuration Mode

Example

`Switch# show dot1x status`

6.5 SNMP Configuration

SNMP Configuration Command :

`snmp snmp version`

6.5.1 snmp

Command Description

- ✓ `snmp` , Enable SNMP
- ✓ `no snmp` , Disable SNMP

Parameter

N/A

Default

Enable

Command Mode

Configure the command under Global Configuration Mode

Example for enable SNMP

`Switch(config)# snmp`

6.5.2 snmp version

Command Description

- ✓ `snmp version`, Enable setting SNMP Version
- ✓ `no snmp version`, Setting SNMP Version to default

Parameter

N/A Default

`snmp v2c`

Command Mode

Configure the command under Global Configuration Mode

Example for configuring SNMP Version

```
Switch(config)# snmp version v2c
```

Chapter 7 System Maintenance Command

7.1 Device Reboot Command :

reload cold

7.1.1 reload cold

Command Description reload cold , for rebooting device

Parameter

N/A

Default

N/A

Command Mode

Configure the command under Privilege Mode Example for rebooting device after save all configuration

```
switch# copy running-config startup-config
```

```
switch# reload cold
```

7.2 Restore to default

Restore to default command :

reload defaults

7.2.1 reload defaults

Command Description

reload defaults, For restoring to default, after it, the device will back to default after rebooting Parameter

N/A

Default

N/A

Command Mode

Configure the command Privilege Mode

Example for restoring to default

`switch# reload defaults`

7.3 ping testing

Ping testing command :

ping ip

7.3.1 ping ip

Command Description

ping ip _addr

Parameter

Parameter	Parameter Command Mode
Ip_addr	Ip address, valid ranges X.X.X.X.

Default

N/A

Command Mode

Configure the command under Privilege Mode Example for testing connection

Between switch and mainframe

```
switch# ping ip 192.168.255.387
PING server 192.168.2.1, 56 bytes of data.
64 bytes from 192.168.2.1: icmp_seq=0, time=0ms
64 bytes from 192.168.2.1: icmp_seq=1, time=0ms
64 bytes from 192.168.2.1: icmp_seq=2, time=0ms
64 bytes from 192.168.2.1: icmp_seq=3, time=0ms
64 bytes from 192.168.2.1: icmp_seq=4, time=0ms
```

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